A Dissertation on

"BENIGN BREAST DISEASES"

HUNDRED CASES

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CERTIFICATE

This is to certify that this dissertation in **"BENIGN BREAST DISEASES "** is a work done by **Dr.PRINCESS BEULAH. D,** under my guidance during the period 2004 - 2006. This has been submitted in partial fulfillment of the award of M.S. Degree in General Surgery (Branch - I) by the Tamil Nadu Dr.M.G.R. Medical University, Chennai - 600 032.

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INTRODUCTION

Benign diseases of breast are the commonest diseases affecting the female covering much morbidity and anxiety in them. Upto 30% of women will suffer from benign breast lesions requiring treatment at some time of their life. Premenopausal women are most affected.

The most common symptoms are pain (47%) and lump (35%)

Aim of the treatment is to exclude malignancy and once this has been done, to treat any remaining symptoms.

Out study is intended to find out the common Benign breast diseases affecting the women in reproductive age group and the common clinical presentation and various investigations adopted and analyse different modalities of treatment

AIM

STUDY OF 100 CASES OF BENIGN BREAST DISEASES

To discuss about the benign lesions of breast based on history, clinical features, physical examination, cytological study, histopathological examination and management.

The purpose of the study is to assess

a) The age groups commonly affected

b) The clinical presentation of various benign diseases

c) The cytological features

d) The usefulness of F.N.A.C. in non neoplastic disease

e) The efficacy of medical and surgical management of various benign lesions.

REVIEW OF LITERATURE

BREAST ANATOMY AND PHYSIOLOGY

Development

The breasts are modified sweat glands. In fifth or sixth week of development 2 ventral bands of thickened ectoderm appear. The ingrowth of ectoderm forms a primary tissue bud in the mesenchyme. The primary bud develops into 15-20 secondary buds-become lactiferous ducts and alveoli. Towards the end of gestation the lactiferous ducts become canalized and open on to a pit in the epidermis. Mesenchymal proliferation beneath the epidermis allows nipple development. Failure results in inversion. Breast lies totally within the superficial fascia of anterior and lateral chest wall between 2nd and 6th intercostal space and anterior axillary line to sternal edge.About 2/3rd of breast rests upon pectoralis major and 1/3 rd on serratus anterior and the lower medial quadrant is on aponeurosis of external oblique.But prolongation is seen above to clavicle, below to 8th rib,medially to midline and laterally to anterior border of latissmus dorsi.

Prolongation of upper outer quadrant of axillary tail of Spence through an opening in the axillary fascia-Foramen of Langer.

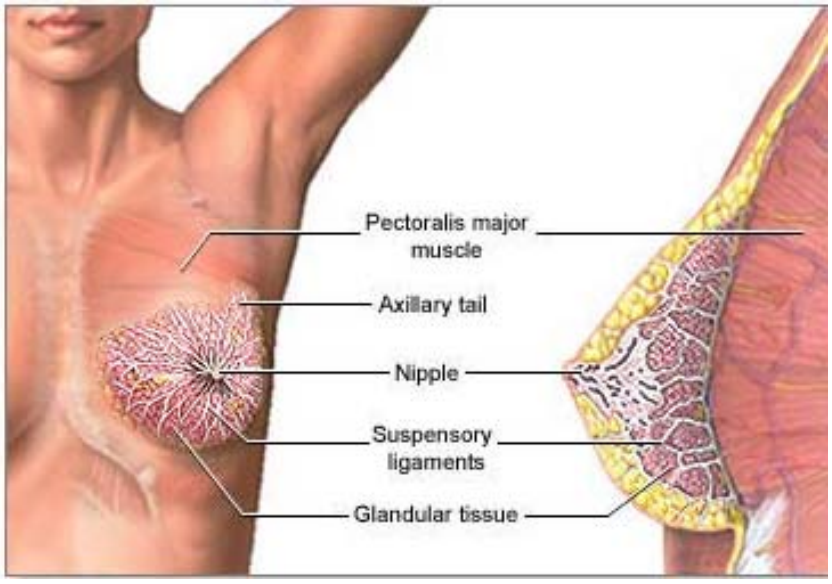
Architecture

Breast is composed of acini which makeup lobules,aggregation of which forms the gland.The lobes are arranged in radiating fashion like

the spokes of a wheel and converage on the nipple,where each lobe is drained by a duct,18-20 ducts open on to the nipple.The nipple and areola is free of fat but contain circular and longitudinal smooth muscle fibres.The skin of nipple and areola contain modified sweat and sebaceous glands especially at outer margin.

Breast is anchored to skin and pectoral fascia by Coopers ligament.This ligament is responsible for dimpling of skin and fixation in carcinoma breast.

Retromammary bursa is between investing layer of breast and pectoral fascia.



Blood supply and Venous drainage:

1. Internal mammary artery through 4 perforators.
2. 2nd 3rd and 4th intercostal arteries.
3. 3Branches of axillary artery- Thoraco acromial artery
   Subscapular artery
   Lateral thoracic artery

Three group of Veins

1. Perforating branches of internal thoracic.
2. Perforating branches of posterior intercostal.
3. Tributaries of axillary vein

Nerve Supply

Sympathetic via 2nd to 6th intercostal nerves.Skin is supplied by 4,5 and 6th intercostal nerves.

Lymphatic drainage

Lymph flow is from superficial to deep.The valveless subepithelial plexus from skin drain into valved Subdermal plexus.Lymphatics of skin communicate across midline.

The principle nodes are axillary-drain 85% of breast and remaining to other nodes-internal mammary nodes.

The Axillary nodes are.

Level I-below pectoralis minor.

Level II-behind pectoralis minor.

Level III-above pectoralis minor.

Level I

a)Lateral group-lie medial/posterior to axillary vein.

b)Anteior or pectoral group-lie along lower border of pectoralis minor.

c)Posterior/Subscapular-lie along post wall of axillae.

Level II
a)Central group -in the fat posterior to pectoralis minor.

b)Interpectoral(Rotter)-between pectoralis minor and major.

Level III

a)Apical or subclavicular group.

Others

Internal mammary nodes lie along the perforating branches of internal mammary artery.

Supraclavicular nodes, deltopectoral nodes, posterior intercostal nodes, subdiaphragmatic plexus, subperitoneal lymph plexus.

PHYSIOLOGY

Changes during menstrual cycle

During proliferative phase-mitosis within acini gradually lessen and small luminal spaces slowly widen.During secretory phase lumen further enlarges,lining epithelial cells develop microvilli and glycogen is deposited.Later they exhibit true apocrine secretion.

During Menstruation-The lumen remains distended but the cellular activity decreases.

There is no change in the number of lobules and acini in premenstrual phase as studied by Haagenson.He suggested the premenstrual change in density and size may be due to blood or lymph or extravascular fluid.But recent evidence shares little change in body water content throughout phase of menstrual phase.

Changes during pregnancy and lactation

I trimester: lobular size increases slowly.Epithelial cells show marked changes with cytoplasmic vacuolation and prominent nucleoli.Mitosis is present.

II trimester: The lobules are markedly swollen. Number of acini are dilated with secretion. In the epithelial cells there is organelle development and microvilli at luminal surface.

III. Trimester: Further increase in size results in obliteration of stroma. Myoepithelial cells do not proliferate as much but are elongated or stretched. The number of myofilament bundles increases .Yellowish fluid, Colostrum seen at nipple during this phase.

During lactation the acini are distended with secretion and fills the ductal system.

Changes due to involution

Involution occurs as soon as the lactation ceases. It occurs in a slower and more subtle rate with age. Lobular volume reduction and loss of epithelial elements begin at about 30 yrs of age and goes on until early 60's .This doesn't depend on ovaries alone, as castrated women also have lobular development.

classification & clinical features of Benign breast diseases

ANDI [Lumpy breast, tenderness or smooth lumps]

- cyclical nodularity and mastalgia.
- cysts
- fibroadenoma
- Duct ectasia / periductal mastitis.

Pregnancy related

-galactocele

-puerperal abscess

Congenital disorders

-inverted nipple.

-supernumerary breast/nipple

-nonbreast disorders

-Tietze’s disease

-sebaceous cyst and other skin conditions

ANDI classification of Benign breast diseases

	Normal	Disorder	Disease
Early reproductive years (15-25yrs)	Lobular development Stromal development	Fibroadenoma Adolescent hypertrophy	Giant fibroadenoma Gigantomastia
	Nipple eversion	Nipple Inversion	Subareolar abscess. Mammary duct fistula
Late reproductive years (age 25-40)	Cyclical change of menstruation	Cyclical mastalgia Nodularity	Incapacitating mastalgia.
	Epithelial hyperplasia of pregnancy	Bloody nipple discharge.	
Involution (age 35-55)	Lobular involution	Macrocysts Sclerosing lesion.	
	Duct involution -Dilatation -sclerosis	Duct ectasia. Nipple retraction	Periductual mastitis
	Epithelial Turnover	Epithelial hyperplasia	Epithelial hyperplasia with

			atypia

Symptoms of benign breast diseases

Breast pain(mastalsia)

-cyclical

-primary non-cyclical

musculo skeletal

sclerosing adenosis

postoperative

cervical root pain.

Breast lumps

fibroadenoma

cylical nodularity

cysts

galactocecle

sclerosing adenosis

fat necrosis

lipoma

chronic abscess.

Disorder of nipple and periareolar region
- Discharge

- Retraction

- Sepsis

Breast infection
- Lactational

- Non lactational

ANDI

Aberration of normal development and involution has been developed and described by Cardiff breast clinic. Other terms - fibrocystic disease, fibroadenoma, chronic mastitis and mastopathy

The basic classification of the ANDI are

1. Benign breast disorder and diseases related to the normal processes of reproductive life and to involution.

2. There is a spectrum of conditions ranges from normal to disorder to disease.

3. ANDI encompasses all aspects including pathogenic and the degree of abnormality.

Mild abnormality-disorder.Severe abnormality-disease.

Early reproductive years

Fibroadenoma

Fibroadenoma is seen in young women 15-25yrs.Usually grow to 1-2cm size, stable ,but may grow to larger size. Small fibroadenoma are considered normal .More than 3cm is considered disease. More than 5cm as giant fibroadenoma - also a disease.

Multiple fibroadenoma-more than 5 in one breast.

Gigantomastia

Limited stromal hyperplasia leads to hypertrophied breast.

Massive stromal hyperplasia leads to gigantomastia.

Nipple Inversion

Disorder of development of ducts which prevents protrusion of nipple. Nipple inversion predisposes to major duct obstruction leading to recurrent subareolar abscess and mammary duct fistula.

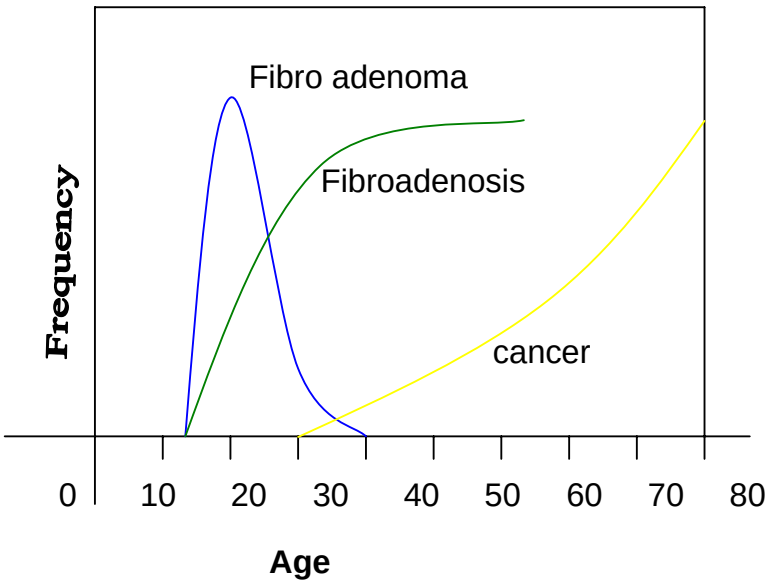
Later reproductive years:

Cyclical mastalgia and nodularity associated with premenstrual enlargement of breasts - considered normal.

Cyclical pronounced mastalgia -severe painful nodularity persists for more than 1 week of menstrual cycle is considered as disorder.

In pregnancy -bilateral bloody discharge

Normal breast changes throughout life
National Health Science Breast Screening Programme



Involution

Integrated involution of breast stroma and epithelium is not always seen. When stroma involutes quickly-microcysts occur which predisposes to macro cysts.

Sclerosing adenosis-disorder of proliferation and involution. One of four features may be seen.

1)Cyst formation

2)Fibrosis

3)Hyperplasia or atypia.

4)Papillomatosis.

Individual Diseases:

The Nipple

Congenital:

Athelia - Absence of nipple.

Polythelia refers to more than one nipple serving a single breast.

Polymazia - Supermammary nipples-Occur along a line extending from anterior fold of axilla to groin.

Nipple Retraction

Simple-at puberty of unknown etiology. In 25% it may be bilateral.

It causes problem in breast feeding and infection due to retention of secretion.

Resolves spontaneously

Cracked Nipple

Occur during lactation. It may be a forerunner of mastitis.

Treated by rest for 24-48 hrs, feeding resumed as soon as possible.

Eczema

Rare, bilateral, treated with 0.5% hydrocortisone ointment.

Others

Papilloma, chancre, retention cyst of montgomary.

Abnormal discharge:

The discharge from nipple may be unilateral or bilateral.

May be from single duct or from multiple ducts.

The content of discharge may be milk, blood, serous or altered blood.

If the discharge is bilateral and the content is milk it is called galactorrhoea. The patients should be evaluated for serum prolactin level if there is no history of lactation in the recent past. The content is confirmed by testing for lactose and milk proteins.

Discharge from single duct should be evaluated especially if it is bloody or the content is hemoglobin positive. The risk of underlying cancer without mass is 5.9%. In the absence of palpable mass or a suspicious mammram, this symptom is usually not associated with cancer. The most common cause of discharge from a single duct is a solitary intraductal papilloma that requires biopsy.

The cause of multiple duct discharge are

Duct ectasia

Fibrocystic diseases

Cystic mastopathy

Breasts

Amastia

Absence of breast tissue is very rare anomaly.

Polymastia

Accessory breast tissue is located above breast in the axilla.

Mastitis of infants

On $3^{rd}/4^{th}$ day of life, colourless fluid can be expressed from breast which is called witch milk. Due to stimulation of fetal breast by maternal prolactin.

This condition is physiological subsides on its own.

Diffuse Hypertrophy:

Occurs at puberty or 1^{st} pregnancy

Treated by Antiestrogens, reduction mammoplasty.

Injuries

Hematoma
Resolving hematoma may be present as lumps.

Traumatic fat necrosis:

After a blow or individual violence-painless lump appear.

May mimic carcinoma-biopsy required for diagnosis.

Inflammation
Bacterial mastitis / intramammary abscess

- Common in lactating women

- 32% occurs in non-lactating women also.

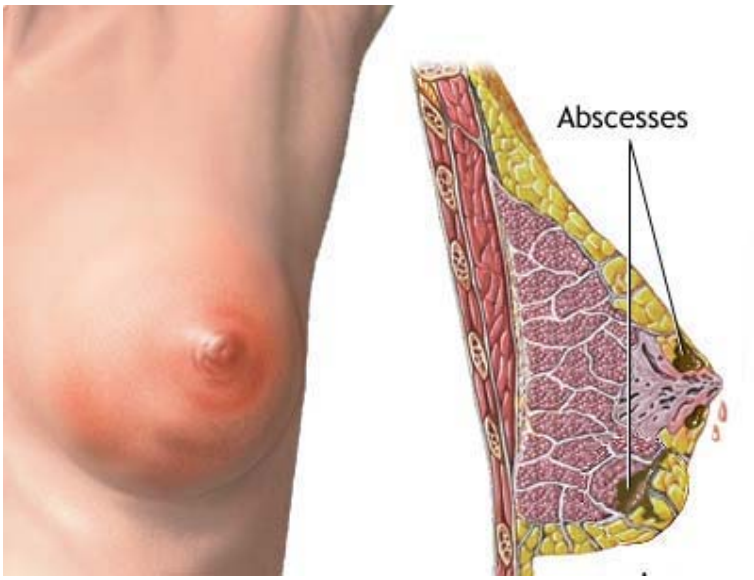
Due to

- Infected hematoma

- Cracked nipple.

- Infection from babies mouth-commonly staph. aureus.

- Periductal mastitis



Treatment:

- Rest to the breast-can feed with opposite breast.
- Infected breast should be emptied
- Support
- Analgesic and antibiotic.
- If abscess formed incision and drainage.

Chronic intramammary abscess

- Due to inadequate drainage and antibiotic treatment.
- Biopsy needed to exclude carcinoma.

Tuberculosis, syphilis & actinomycosis also seen but rare.

Mondors disease or string phlebitis

Thrombophlebitis of superficial vein of breast & chest wall. Benign & self limiting disorder.

Treated by

Rest

Support

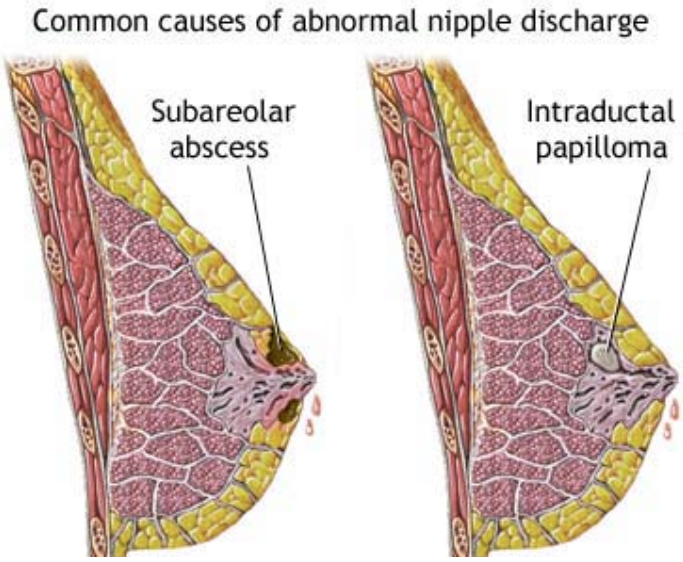
Analgesics

If symptoms persist excision

Duct ectasia / periductal mastitis
- Dilatation of ducts & inflammation.

- Common in smokers.

- Present as mass, discharge, slit like nipple retraction, abscess, mammary duct fistula.



Treatment

Stop smoking, antibiotics, Hadfield operation.

Lumpy breasts

Cysts

- More common in last decade of reproductive life.

- Bilateral & multiple,.

- Diagnosis by ultrasound and aspiration.

- Treated by aspiration.

- If doesn’t disappear, blood stained fluid or recurrence excision is done

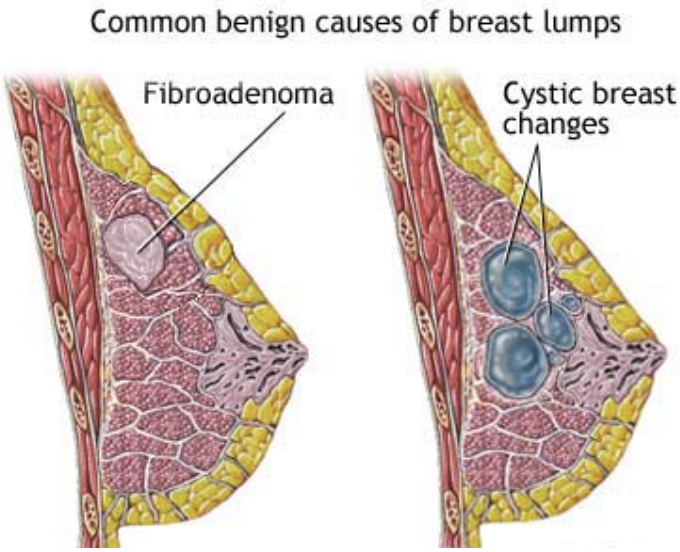
lumpiness

- Usually bilateral, common in upper, outer quadrant.

- Usually cyclical.

- Associated with mastalgia.

Reassurance is the treatment.



Galatocele

Solitary, subareolar cyst, contains milk-may calcify.

Fibroadenoma

They are derived from the breast lobule; characteristed by proliferation of connective tissue and epithelium.

It may be

Intracanalicular.

Pericanalicular type

They function during lactation & after menopause they undergo involution.

Giant fibroadenoma

It has bimodal age of presentation in 14-18& 45-50 yrs age group

In younger age-Juvenile Fibroadenoma.

Size more than 5cm diameter.

Phylloides tumour

Almost benign to locally aggressive, recurrent metastatic tumour. Well circumscribed to bosselated surface. Common in premenopausal group.

Advanced cases skin may ulcerate.

MASTALGIA

maybe - Noncyclical

- Cyclical

Cyclical mastalgia

Cyclically produced discomfort, fullness & heaviness in breast 3-7 days preceeding menstruation & disappears with flow.

Prolonged cyclical mastalgia

Symptoms present in late phase of menstrual cycle,recommence as soon as menstrual flow starts & gain intensity till the next menstruation.

Non cyclical Mastalgia

Breast pain not associated with cyclical ovarian function, it may be continuous.

Causes may be-Duct ectasia, fat necrosis, sclerosing adenosis, radial scars, lobular carcinoma.

Altered prolactin metabolism may be a reason for troublesome mastalgia.

GYNECOMASTIA

Gynecomastia is enlarged breast in male,90% bilateral.

Physiological

1) Neonate:due to placental estrogen.

2) Adolescents:excess estradiol in relation to testosterone.

3) Oldage:circulating testosterone falls with relative hyperestrinism

Pathological

Nutritional
Protein & fat deprivation.

Endocrine disorder

Hypothyroidism, Hyperthyroidism.

Hepatic Disorder

Non-alcoholic/alcoholic cirrhosis.

Testicular failure

Primary due to ACTH deficiency, heretidary defects of androgen synthesis, congenital anorchism. Secondary due to trauma, orchitis, cryptorchism, renal failure, testicular teratoma, klinefelter's syndrome.

Drugs

With estrogenic activity

digitalis, estrogen, anabolic steroid, marijuana.

By enhancing estrogen synthesis:

HCG

By inhibiting testosterone synthesis

Cimetidine, ketoconazole, phenytoni, spironolactone, diazepam, antineoplastic drugs.

Idiopathic mechanism

Reserpine, verapamil, theophyllin, frusemide, tricyclic antidepressants.

Classification:

GRADE I : Mild breast enlargement without skin redundancy.

GRADE IIa) : Moderate breast enlargement without skin redundancy.

GRADE IIb) : Moderate breast enlargement and skin redundancy.

GRADE III : Marked enlargement and ptosis simulates female breast.

Treatment:

1) If due to androgen deficiency, testosterone is the treatment of choice.

2) Stop drugs causing gynecomastia.

3) It patients has endocrine problem- treat that

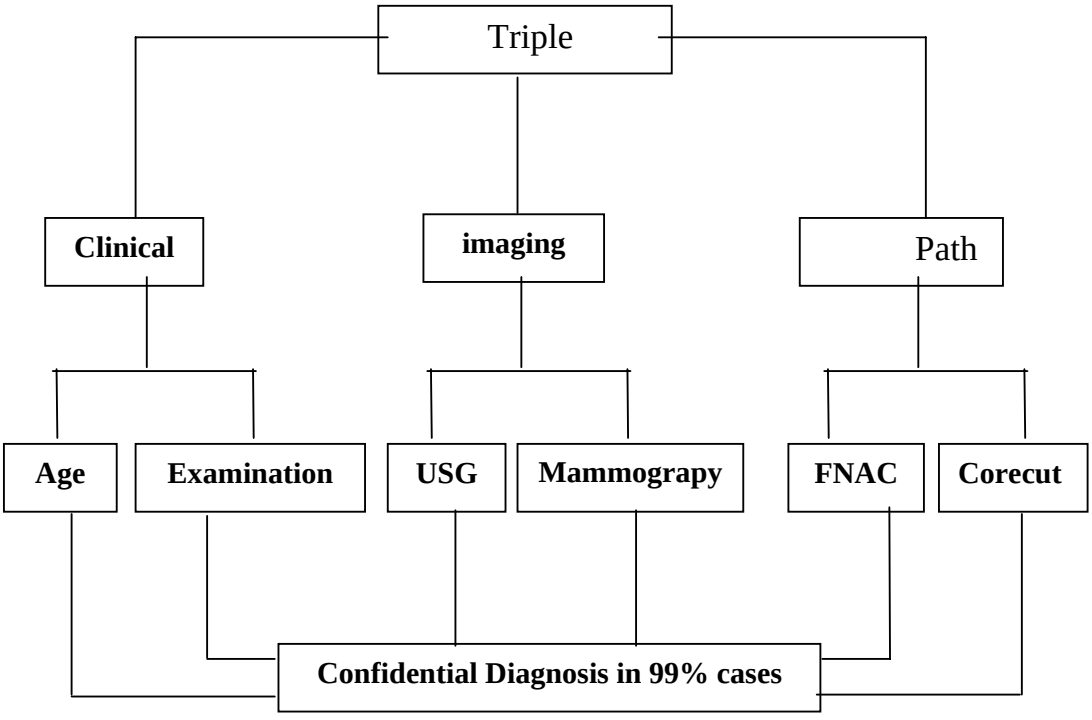
4) Danazol-may be useful.

5) If doesn't respond-Webster's surgery

6) Liposuction can also be done.

INVESTIGATIONS

In any patient presents with lump or other symptoms, the diagnosis made by a combination of clinical assessment, radiological imaging and a tissue sampling for cytological or histological analysis- Triple assessment with positive predictive value (PPV) should be more than 99.99%



MAMMOGRAPHY

This is a soft tissue X-ray taken by placing breast in direct contact with ultra sensitive film and exposing to low voltage, high ampere X-

rays. Dose is around 0.1c Gray. A chest X-ray delivers 25% of this dose. No increased risk of cancer breast associated with this dose. Two views are taken.1)Craniocaudal. 2) mediolateral.

In addition 90 degree lateral and spot compression views can be taken. It is of limited value in less than 40 yrs. Not a routine test for nonneoplastic disease of breast.

Indication

1. Screening for women less than 35 yrs with family history of carcinoma breast.
2. Nipple discharge.
3. Diffuse hypertrophy.
4. Suspicious lump.
5. Nipple retraction.

Interpretation

Fibroadenoma

Is shown as medium or mixed density. Usually lobulated with well defined margins, bilateral. Thin peripheral or complete halo sign may be present.

Cyst

Low , medium dense, round , well defined, painful compression with total hair line halo sign. Pop corn calcification may be present.

Benign calcification seen as micro or macro calcification. Ductal calcification seen as tubular calcification.

The reports of mammogram are interpretated by BIRADS system.

Breast imaging reporting and data system (BI - RADS). Final Assessment category.

Category	Definition
0	Incomplete assessment; need additional imaging evaluation.
1	Negative, routine mammogram in 1 year recommended.
2	Benign finding; routine mammogram in 1 year recommended.
3	Probably benign finding; short-term followup suggested.
4	Suspicious abnormality; biopsy should be considered
5	Highly suggestive of malignancy; appropriate action should be taken.

Xeromammography

Identical to mammography but image is recorded in a xerography plate, provides positive image.

Ductography

Radioopaque material is injected into suspected duct and mammography taken. Mainly for intraductal papilloma.

Digital Mammography

Latest advancement of mammography that acquires digital images and stores them electronically.

ULTRASONAGRAM

Useful in women with dense breast in whom mammography is difficult to interprete.

To distinguish solid and cystic lesion.

To aspirate fluid.

Not useful for screening.

Operator dependent.

MRI:

Useful to distinguish scar from recurrence.

Gold standard in female with implants.

Useful in screening axilla.

In cases of occult breast cancers also it is useful.

Contraindication: Within 9 months of radiation.

CT:

Is useful to image internal mammary nodes.

To evaluate the chest and axilla after mastectomy.

Invasive:

FNAC

Aspiration cytology is an accurate pre operative diagnostic procedure for evaluating breast lump.

Diagnostic accuracy 96.9%

Positive Preditive Value 98.4%

Negative Preditive Value 95.7%

The reason for diagnostic failure are unsatisfactory aspiration and interpretation error. Advantage can be done as OP procedure.

Procedure

The patient is made to lie on the table with raised arms on the side to be examined. The mass is fixed with thumb and index finger. 21 or 23G needle with syringe containing 5ml of air is introduced into the lump and syringe is pulled into full suction in different direction.

While withdrawing, the suction force is released to avoid dispersion of aspirate into the syringe. The contents expressed on glass slide and fixed with alcohol fixative.

The report is as

- Benign /no evidence of malignancy

- Suspicious of malignancy.
- Unsatisfactory/acellular smear.

Cytology of Benign breast lesion:

Normal cytology

The normal alveoli lined by simple epithelium, consist of cuboidial or low columnar cells. Ducts lined by cuboidal or low columnar epithelium.

Atypical nonmalignant cytology:

Exfoliation of well organized papillary fragments in addition to single cells. Cluster of individual cells show enlargement, metaplasia, engulfment and vacuolation which are often extreme. The nuclei do not show marked abnormalities. If nuclear enlargement, hyperchromasia noted-suspect malignancy.

Cytoplasm shows fine uniform vacuolation. Acidophilic & basophilic cells are intermixed. Acidophilic cells contain secretory granules. Nuclei spherical-occasional binucleation seen. In chronic mastitis increased leucocytes seen.

TRUCUT BIOPSY/CORE BIOPSY.

A core of tissue removed with trucut biopsy needle and more informative.

PROCEDURE

After local anesthetic injected, a 3mm skin incision is made and an 11 G core biopsy needle with vaccum assistance is inserted into the lesion to obtain the tissue sample. Firing the machine obtains a core biopsy through the abnormality.

It can be done using mammographic (stereotactic) or ultrasound guidance.

The reports are

65% benign

10% inconclusive

The remaining are malignant.

The in conclusive histology may be

1. atypical cells on pathology
2. reports are discordant from mammographic finding.

3. increased cellularity with in a fibroadenoma

4. Inadequate sampling of the site

For the patients, a wire localisation and excisional biopsy are performed to clarify the histology.

EXCISION BIOPSY

Whole or major portion of lesion is available for final diagnosis , extent and severity of disorder.

HISTOPATHOLOGICAL EXAMINATION

Fibroadenoma

Consists of two components.

a) Connective tissue stroma-proliferated.

b) Ducts and acini which appear to have multiplied in an atypical way.

There are 2 types.

1) Pericanalicular: Connective tissue proliferation occurs around the ducts.

2) Intracanalicular-fibrous proliferation invaginate ducts.

Giant Fibroadenoma:

- A variation of intracanalicular fibroadenoma.

- Having more cells than fibrous tissue.

Cytosarcoma phylloides

Similar pattern with high mitotic index-has malignant potential to sarcoma.

Fibrocystic Disease

4 dominant forms:

a) Fibrosis.

b) Cyst formation

c) Sclerosing adenosis

d) Duct epithelial hyperplasia

a) Fibrosis:

Section shows homogeneous white, pink collagenous connective tissue devoid of fat. Glandular parenchyma is barely visible as yellow pink areas.

b) Cystic Disease:

Also known as Blue domed cysts, Bloodgood cysts, Schimmelbusch's disease. The cysts are blue to brown filled with serous, turbid fluid that flows readily to disclose a smooth glistening membranous lining devoid of thickening or pappilary proliferation. Lining epithelium may be flattened and even totally atrophic or may go in for metaplasia known as apocrine metaplasia. Cystic disease is usually associated with lymphocytic infiltration of stroma.

c) Sclerosing adenosis:

Cut section shows hard cartilaginous consistency. Proliferation of small ducts, canaliculi and gland buds may yield masses of small gland patterns or nests within a fibrous stroma. Histologic differentiation of a florid case of sclerosing adenosis from frank cancer is difficult.

d) Epithelial hyperplasia :

There is multi layering of the duct lining epithelium due to proliferation, solid masses extending and enclosing into the duct lumen and partially obstructing it. Papillary epithelial projection may grow into the lumen.There may be atypia.

Mammary Duct Lesion:

a) Papillomatosis:

Proliferation of epithelium of mammary ducts . Many ducts are involved.

b) Epitheliosis

Epithelial proliferation showing regular increase in epithelial cells.When such a process contains irregular cells with pleomorphism,carcinoma in situ is specified.

Mammary Duct ectasia:

It is a fibrotic thickening of duct wall with atrophy of the lining epithelium and lymphocyte infiltrate around the duct and inspissation of duct lumen with an amorphous fat containing material

Periductal mastitis

Inflammatory plasma cell infiltrate surrounding ectatic ducts. It may lead to nonpuerperal breast abscess. If it fail to resolve-chronic discharging mammary sinus results.

Acute infection:

Profuse infiltration of neutrophils while histiocytes are less numerous with sparsely scattered lymphocytes.

Cysts:

Microcysts are fluid filled epithelial lined cavities.

Incisional Biopsy:

While performing the incision should be made so that scar becomes least visible.

TREATMENT

Cyclical Mastalgia

1) Reassurance

2) Support-Tight brazzier in day time. Soft sports bra in night time.

3) Avoid caffeine

4) Oil of evening primrose:

   - A rich source of linoleic acid.

   - Especially useful in premenopausal women.

5) Antiinflammatory drugs and diuretics are controversial.

6) Danazol 100mg tds-Start in 100mg /day & increase slowly

   - Antigonadotrophin-causes suppression of FSH & LH.

7) Bromocriptin 2.5 mg bd

   - Dopamine antagonist.

   - Corrects hyperprolactinemia.

8) Tamoxifen 10-20mg/day

   - Antiestrogen

   - Corrects hyperestrogenism.

9) Progesterone-Medroxy progesterone acetate 20mg/day.

Noncyclical mastalgia:

- Will not respond to hormonal therapy.
- Analgesics
- Steroids
- Local anesthetic injection
- 54% associated with nodularity –responds to danazol
- Segmental excision to simple mastectomy in refractory case.

Fibroadenoma

All fibroadenoma need not be removed especially if size less than 2.5 cm; age less than 25 yrs. Resolution of fibroadenoma takes a longer time, around a year.

Enucleation under general anesthesia by circumareolar incision.

Giant Fibroadenoma

Excised though submammary incision.

Cysts

Solitary cysts can be aspirated.

If they resolve fully & no bloody aspirate no further treatment is needed except followup.

30% recurrence-Local excision needed.

Duct Ectasia:

- Antibiotic-Flucloxacillin, Metronidazole.

- Surgery-Microdochectomy.

- Hadfield surgery.

Abscess:

1) Support with brazzier.

2) Rest - atleast for 48 hrs-can feed with opposite breast

3) Hot fomentation

4) Antibiotic

5) Aspiration by needle.

6) Circum areolar incision & access to the area or radial incision over affected area and drainage.

RISK OF MALIGNANCY IN BENIGN BREAST DISEASE

Certain lesion with epithelial hyperplasia particularly of a moderate to severe degree and with atypia are associated with increased incidence of malignancy.

No increased Risk:

- Adenosis, Sclerosing or florid.
- Apocrine metaplasia
- Cysts micro/macro
- Duct ectasia
- Fibroadenoma
- Fibrosis
- Hyperplasia
- Mastitis [inflammation]
- Periductal mastitis
- Squamous metaplasia

Slightly Increased risk [1.5-2 times]

- Hyperplasia- moderate or florid, solid or papillary.
- Papilloma with a fibrovascular core.

Moderatly increased risk[5 times]

- Atypical hyperplasia [ductal or lobular].

Insufficient data to assign risk

- Solitary papilloma of lactiferous sinus.

- Radial scar lesion.

So women whose biopsy showed epithelial hyperplasia are of greatest importance and they are 2-3 times risk of developing carcinoma than general population.

MATERIALS AND METHODS

During the 2 years period between October 2004 to October 2006 at Kilpauk Medical college Hospital, 100 cases of Benign breast disease were studied in our surgical inpatient department.

We had 75 cases of Fibroadenoma,10 cases of Fibrocystic diseases, 6 cases of gynecomastia;1 case of breast cyst,3 cases of chronic abscess,1 case of filarial mastitis were examined and studied.

We analyzed the clinical features, age incidence, the quadrant affected, axillary nodal status, nipple discharge, FNAC & HPE report.

Detailed history, clinical examination & relevant investigation including FNAC & excision biopsy of suspected lumps were undertaken from patients who presented to our surgery department.

PRESENT STUDY AND OBSERVATION

All patients belong to 15-40 yrs age group except 4 cases 53 yrs, 55 yrs, & 2cases of 73 yrs.

Age incidence, clinical presentation & management were analyzed.

FNAC & excision biopsy done in all cases.

All the above features were taken into consideration & analyzed in the study.

OBSERVATION

Age incidence:

Our series consisted of 100 cases of age group ranging from 15-40 yrs except 4 cases. The lowest age is 15yrs & highest is 73 yrs. Maximum number of cases were in the age group of 21-25 yrs. Majority of cases (96) belong to low socio economic status. The lowest age of fibroadenoma is 15 years and highest is 39 years. The lowest age of fibrocystic disease is 22 years and highest is 74 years.

Highest incidence (20) for fibroadenoma is in 20-25 yrs age group & for fibrocystic disease is 36-50 yrs.

Fibroadenoma is the commonest lesion (75/100). Next is Fibrocystic disease [10/100].

Only 1 case of giant fibroadenoma in 29 yrs. Multiple fibroadenoma 1 case in 15 years.

Only 1 case of cystosarcoma phylloides in 36 - 40 yrs.

We have 6 cases of gynecomastia, common in 15-20 yrs age group (5).

Chronic abscess 2 cases in 36-49 yrs & 1 in 31-35 yrs. Galactoceles 2 cases in 26-30 yrs & 1 case in 31-35 yrs.

Filarial mastitis 1 case in 26-30 yrs age group

Breast cyst-1 case in 31-35 yrs age group.

CLINICAL FEATURES

All 100 cases present with lump breast as their main complaints.

Out of 75 cases of fibroadenoma,15 cases complaint of vague nonspecific pain in the lump & tenderness.

Out of 10 cases of fibrocystic disease, all complaints of lump in the breast & pain, 9 cases complained of cyclical mastalgia & had vague tenderness associated with menstruation.

4 cases of fibroadenoma & 2 cases of fibrocystic disease had non specific axillary lymph node enlargement.

Nipple discharge & retraction were not seen.

Skin tethering seen in 1 case of chronic abscess

Gynecomastia 6 cases presented with lump & 3 cases with pain.

Chronic abscess all presented with lump & pain

INVESTIGATION

FNAC done in all cases.

Excision biopsy was done as an investigation in doubtful cases (15) and in other cases as treatment.

USG done only in one case in case of breast cyst.

MANAGEMENT

All 75 cases of fibroadenoma were managed surgically.15 cases of fibroadenoma were associated with fibrocystic disease..

All the 10 cases of fibrocystic disease were treated initially with analgesic and anti-inflammatory drugs & oil of evening prim rose-not relieved & then taken up for surgery. All cases were proved to be fibrocystic disease by histopathological examination.

All the 3 galactocele cases diagnosed as lump & excision done-HPE proved it to be galatocele.

One case of chronic abscess was treated by incision & drainage & other 2 were deep seated & treated by excision.

All the 6 gynecomastia were young males. Treated by Webster's operation by a circumareolar incision from 3-8 O' clock position.

RESULTS

Total cases Fibroadenoma-75

Fibrocystic disease-10

Quadrants	Fibroadenoma	Fibrocystic disease
Rt upper medial	11	5
Rt lower medial	1	-
Rt upper lateral	22	-
Rt lower lateral	-	1
Lt upper medial	20	2
Lt lower medial	2	-
Lt upper lateral	17	1
Lt lower lateral	1	1
Bilateral	1	-
Total	**75**	**10**

Lt breast was involved in (40) cases of fibroadenoma & Rt breast was involved in 6 cases of fibrocystic disease. Rt breast involved in 34 cases of fibroadenoma & Lt breast in 4 cases of fibrocystic disease.

Both breast involved in 1 case of fibroadenoma

Whole breast was involved in giant fibroadenoma & phylloides tumour.

Rt upper lateral quadrant [22] commonly involved in fibroadenoma followed by Lt upper medial quadrant [20]. Then by Lt upper lateral [17] & Rt upper medial quadrant.

Rt upper medial quadrant [5] followed by Lt upper medial quadrants in fibrocystic disease.

SUMMARY

Benign lesion are the commonest breast diseases affecting women. In our study fibroadenoma & fibrocystic disease were common. The incidence for fibroadenoma was high in 21-25 yrs & for fibrocystic disease 31-50 yrs.

Dominant symptoms were lump and pain.

Excision done in all the studied cases.

FNAC done in all the cases.

No of patients:100

Disease	HPE report	FNAC report	Accuracy of Report
Fibroadenoma	71	75	95%
Fibrocystic disease	16	10	63%

FNAC is very efficient investigation in diagnosing fibroadenoma & good in fibrocystic disease.

In chronic abscess & galactocele biopsy report found to be correlating with FNAC report.

But excision biopsy stands as the ultimate investigation involved in cases of doubtful diagnosis & suspected malignancy which has 100% accuracy.

CONCLUSION

The study proved that Benign lesion are the commonest lesion of female breast, especially of the reproductive age group.

Fibroadenoma is the commonest followed by Fibrocystic disease.

Rt upper lateral quadrant is the commonest area affected in Fibroadenoma.

Rt upper medial quadrant commonly involved in Fibrocystic disease.

Lump & pain are the commonest symptoms.

FNAC is the single most useful investigation with high diagnostic accuracy in experienced hands. The accuracy in Fibroadenoma is 95% & in the Fibrocystic disease is 63%.

Excision biopsy is the investigation of choice in doubtful case.

Histological confirmatory report should be obtained if there is disagreement between cytological & clinical assessment.

Some lesion with feature of malignancy like skin ulceration, nipple retraction & discharge may still be benign.

Complete surgical excision in majority & simple mastectomy in massive involvement & in recurrence.

Medical treatment in Fibrocystic disease is controversial.

MASTER CHART

Sl.No	IP.No	Age	Sex	Site	Menopausal Status	Axillary Node status	Nipple discharge	Clin diagr
1	9985	19	F	RUL	PRE	NO	NO	F
2	761	17	F	RUM	PRE	NO	NO	F
3	10110	21	F	RUL	PRE	NO	NO	F
4	4548	22	F	RUL	PRE	NO	NO	F
5	6629	35	F	RLL	PRE	NO	NO	FC
6	3875	32	F	RLM	PRE	NO	NO	F
7	11184	28	F	RUL	PRE	NO	NO	F
8	98059	15	F	RUL	PRE	NO	NO	F
9	10124	17	M	-	-	-	-	GY
10	10526	17	F	RUL	PRE	NO	NO	F
11	11318	45	F	RUL	PRE	YES	NO	FC
12	11624	19	M	-	-	-	-	GY
13	111942	39	F	RUM	PRE	NO	NO	F
14	12494	28	F	RUL	PRE	NO	NO	F
15	12699	22	F	BOTH	PRE	NO	NO	F
16	12618	29	F	LUM	PRE	NO	NO	Gian
17	12850	28	F	LUM	PRE	NO	NO	FC
18	3196	21	F	RUM	PRE	NO	NO	F
19	13450	27	F	RUL	PRE	YES	NO	Galact
20	13596	43	F	LUM	PRE	NO	NO	FC
21	13437	25	F	LUM	PRE	NO	NO	F
22	14226	16	F	LUL	PRE	NO	NO	F
23	14682	22	F	RUM	PRE	NO	NO	F

24	14088	26	F	LUM	PRE	YES	NO	Cy
25	14089	22	F	RUM	PRE	NO	NO	F
26	3432	18	F	RUM	PRE	NO	NO	F
27	14983	35	F	RUL	PRE	NO	NO	F
28	15091	22	F	BOTH	PRE	NO	NO	F
29	15637	17	F	LUM	PRE	NO	NO	F
30	15759	20	M	-	-	-	-	GYM
31	16185	42	F	LUM	PRE	NO	NO	FC
32	618	18	F	RUL	PRE	NO	NO	FA
33	16003	20	F	RUL	PRE	NO	NO	F
34	15867	21	F	RUL	PRE	NO	NO	F
35	4200	20	F	LUM	PRE	NO	NO	F
36	16063	18	F	RUM	PRE	NO	NO	F
37	4232	27	F	RUM	PRE	NO	NO	F
38	2357	31	F	RUL	PRE	NO	NO	F
39	170098	26	F	RUL	PRE	NO	NO	F
40	4809	27	F	LUM	PRE	NO	NO	F
41	17156	16	F	RUM	PRE	NO	NO	F
42	17444	26	F	LUM	PRE	NO	NO	F
43	17413	18	F	RUL	PRE	NO	NO	F
44	18600	32	F	RUM	PRE	NO	NO	F
45	18191	19	M	-	-	-	-	GY
46	18901	21	F	LUM	PRE	NO	NO	FA
47	18884	29	F	LUM	PRE	NO	NO	F

48	4846	25	F	LUM	PRE	NO	NO	F
49	19424	30	F	RUL	PRE	NO	NO	F
50	19833	33	F	RUL	PRE	NO	NO	F
51	18360	74	F	RUM	POST	NO	NO	FC
52	18367	77	F	RUM	POST	YES	NO	FC
53	19698	38	F	LUL	PRE	YES	NO	Chr Abs
54	20803	29	F	RUL	PRE	NO	NO	FC
55	5379	29	F	RUM	PRE	NO	NO	F
56	20960	35	F	RUL	PRE	NO	NO	F
57	8333	78	F	RUM	PRE	NO	NO	Galact
58	21380	18	F	LUM	PRE	NO	NO	F
59	20921	18	F	RUM	PRE	NO	NO	F
60	21026	38	F	LUM	PRE	NO	NO	FA
61	12603	24	F	LUM	PRE	NO	NO	F
62	20922	36	F	LLM	PRE	NO	NO	F
63	21254	30	F	LLM	PRE	NO	NO	F
64	5566	22	F	LUL	PRE	NO	NO	F
65	21923	25	F	LUM	PRE	NO	NO	F
66	23266	36	F	RUM	PRE	NO	NO	F
67	22686	36	F	LUM	PRE	NO	NO	F
68	22916	32	F	LUM	PRE	NO	NO	F
69	126217	34	F	LUL	PRE	NO	NO	F
70	22883	37	F	LUL	PRE	NO	NO	F
71	23862	20	F	LUM	PRE	NO	NO	F
72	24113	31	F	LUM	PRE	NO	NO	F
73	24401	21	F	RUM	PRE	NO	NO	F
74	24607	16	M	-	-	-	-	GY
75	635	19	F	BOTH	PRE	NO	NO	F
76	26439	33	F	RUL	PRE	NO	NO	Galact
77	26654	18	F	RUL	PRE	NO	NO	F

78	6464	40	F	RUL	PRE	NO	NO	Cy sarc phyll
79	27343	39	F	LUL	PRE	NO	NO	F
80	120321	18	F	LUL	PRE	NO	NO	FA
81	27818	25	F	RUL	PRE	NO	NO	F
82	27813	25	F	RUL	PRE	NO	NO	F
83	27685	26	F	LUL	PRE	NO	NO	F
84	126352	55	F	RUM	POST	NO	NO	FC
85	8586	35	F	LUM	PRE	NO	NO	F
86	27688	20	M	-	-	-	-	GY
87	6844	40	F	LUM	PRE	NO	NO	Chr abs
88	4295	19	F	RUL	PRE	NO	NO	FA
89	7010	29	F	LUL	PRE	NO	NO	F
90	29249	23	M	-	-	-	-	GY
91	276171	23	F	LUM	PRE	NO	NO	F
92	30223	56	F	RUM	POST	NO	NO	FC
93	7263	30	F	LUL	PRE	NO	NO	FA
94	7782	31	F	LUL	PRE	NO	NO	F
95	30540	18	F	LUL	PRE	NO	NO	F
96	2331	25	F	LUL	PRE	NO	NO	F
97	7281	37	F	LUL	PRE	NO	NO	F
98	30903	40	F	LUL	PRE	NO	NO	FC
99	31936	35	F	RUM	PRE	NO	NO	F
100	3328	24	F	LUL	PRE	NO	NO	F

RUL - Right Upper Lateral
RUM - Right Upper Medial
RLM - Right Lower Medial
RLL - Right Lower Lateral
LUM - Left Upper Medial
LUL - Left Upper Lateral
LLL - Left Lower Lateral
LLM - Left Lower Medial
PRE - Pre Menopausal
POST - Post Menopausal
FA - Fibro Adenomo
FCD - Fibro Cystic Disease

GYM - Gyneccomastia

AGE INCIDENCE

Age in years	< 15	15 - 20	21 - 25	26 - 30	31 - 35	36 - 40	41 - 50	>50
Fibro adenoma	1	19	20	17	11	5	-	-
Fibro cystic disease	-	-	-	1	-	3	3	3
Cyst	-	-	-	-	1	-	-	-
Chronic abscess	-	-	-	-	1	2	-	-
Cystosarcoma phylloides	-	-	-	-	-	1	-	-
Galactocoele	-	-	-	2	1	-	-	-
Filarial mastitis	-	-	-	1	-	-	-	-
Gynecomastia	-	5	1	-	-	-	-	-

CLINICAL PRESENTATION

Clinical features	Fibro adenoma	Fibro cystic disease	Galacto cele	Chronic abscess	Cyst	Gynecomastia
Lump	75	10	3	3	1	6
Pain	15	10	-	3	1	3
Axillary node enlargement	4	2	1	1	1	-
Nipple retraction	-	-	-	1	-	-
Skin tethering	-	-	-	1	-	-

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PROFORMA

Name : I.P.No.

Age : Date of Admission

Sex : Date of Surgery

Occupation : Date of Discharge

Pre (or) Post Menopausal

Presenting complaints

Breast Lump

Pain

Nipple discharge/retraction

Dietary habits

Examination

General

Build and nutrition

Lymphadenopathy

CVS

RS

CNS

BP, Pulse

Local Examination

Breast lumpiness / lump

Tenderness

Nipple discharge

Lymph nodes (Regional)

Investigations (Specific)

FNAC of the lump

Ultrasonogram of the breast

Mammogram

Treatement

Medical Management

Aspiration of Cyst

Excision Biopsy

Follow up

Response to Medical Management

Recurrence of Symptoms